

Application No.: 10/732,991

Case No.: 58624US002

REMARKS

Claims 1 to 26 are pending. Claims 27 to 28 are canceled without prejudice in an earnest effort to advance prosecution. Claim 1 is currently amended.

Support for the amendment to claim 1 may be found original claim 1, and in the specification on page 4, lines 1-3.

Election/Restrictions

The Patent Office requires restriction to one of the following inventions under 35 U.S.C. 121:

- I. Claims 1-26, drawn to a fibrous article, said to be classified in class 442, subclass 151.
- II. Claims 27-28, drawn to a method of making a fibrous article, said to be classified in class 427, various subclasses.

Applicants hereby affirm election of the invention of Group I, claims 1-26 without traverse.

§ 103 Rejections

Claims 1, 3-5, 7-16 and 20-26 stand rejected under 35 USC § 103(a) as being unpatentable over Nishikawa et al. (US 2002/0164455) as evidenced by Romanowski (US 2004/0071916) in view of Renz et al. (US 6,187,845).

The Patent Office asserts that Nishikawa et al. teach a porous sheet laminate as a display sheet comprising a nonwoven release sheet, pressure sensitive adhesive containing UV-absorbers and hindered amines, and a nonwoven fabric of synthetic fibers, and that the applied publication specifically states that the type of nonwoven fabric to be used in the invention is to not be restricted.

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The Patent Office further asserts that Romanowski teaches a nonwoven pressure sensitive adhesive tape comprising a nonwoven fabric layer, and that nonwoven fabrics include spunbonded, needle punched (needletacked), and spunlaced fabrics.

The Patent Office admits that Nishikawa et al. do not disclose the specific nature of the pressure sensitive adhesive to be applied to the nonwoven fabric.

The Patent Office further asserts that Renz et al. teach pressure sensitive adhesive compositions that are rendered stable against ultraviolet (UV) degradation via the incorporation of benzotriazole UV absorbers, and that the adhesive compositions may be used to protect interior structures, textiles, and fabrics. The Patent Office further asserts that claim 11 recites that the adhesive composition may contain between 0.1 to 20 weight percent of benzotriazole. The adhesive composition may additionally contain up to another 20% of another UV absorber, hindered amines, or conventional stabilizers, and that additional adhesives may be added to the pressure sensitive adhesive composition.

The Patent Office argues that since Nishikawa et al. and Renz et al. are both from the same field of endeavor, (i.e., fibrous articles with a pressure sensitive adhesive coating comprising UV absorbers and hindered amines), the purpose disclosed by Renz et al. would have been recognized in the pertinent art of Nishikawa et al., and that it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the article of Nishikawa et al. with the adhesive composition of Renz et al. with the motivation of successfully protecting the article of Nishikawa et al. from UV degradation.

Without agreeing to the Patent Office's characterization of Nishikawa et al., Romanowski, or Renz et al., or admitting that the rejection is even proper, Applicants note that claim 1 has been amended to include the feature "wherein the pressure sensitive adhesive is based on a poly(meth)acrylate or silicone." It is submitted that it is known in the pressure sensitive adhesive arts that both acrylic pressure sensitive adhesives and silicone pressure sensitive adhesives generally have good resistance to degradation by sunlight. For example, D. Satas in the Handbook of Pressure Sensitive Adhesive Technology, Van Nostrand Reinhold, New York, ©1989 (Attachment A, which accompanies this response), states on p. 396, in the fourth paragraph:

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"Polyacrylates possess some inherent properties that are superior to many other polymers used for pressure sensitive adhesives. The polymer is saturated and resistant to oxidation. It is transparent, colorless, and does not yellow upon exposure to sunlight. The resistance to oxidation surpasses that of most polymers used for pressure sensitive adhesives, except silicones." [underlining added for emphasis]

In view of the foregoing stability of polyacrylate and silicone pressure sensitive adhesives to light, one would not be properly motivated to include high levels of UV stabilizers in such adhesives as it would be unnecessary for the purpose of stabilizing the pressure sensitive adhesive, especially in view of cost considerations. Further, Applicants present invention demonstrates that, by incorporating the claimed levels of ultraviolet light stabilizer into a pressure sensitive adhesive layer that is in contact with a surface of a fabric, it is, surprisingly, possible to impart a significant degree of ultraviolet light stability to a fabric, as evidenced, for example, on page 11 of the specification, in Table 1, Examples 1 - 5 and Comparative Examples A - F.

For at least these reasons, it is submitted that the rejection of claim 1 under 35 USC § 103(a) as being unpatentable over Nishikawa et al. as evidenced by Romanowski in view of Renz et al. has been overcome and is patentable. Claims 3-5, 7-16 and 20-26 each add additional features to patentable claim 1 and are likewise patentable.

In summary, the rejection of claims 1-26 under 35 USC § 103(a) as being unpatentable over Nishikawa et al. as evidenced by Romanowski in view of Renz et al. has been overcome and should be withdrawn. Reconsideration and withdrawal of the rejection is requested.

Claims 1-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over DiZio et al. in view of Romanowski and in further view of Renz et al. as applied above in the previous rejection.

The Patent Office asserts that DiZio et al. teach an adhesive tape comprising a nonwoven or woven synthetic backing layer with a pressure adhesive coated on its first major surface, and that the adhesive composition may also contain UV absorbers. The Patent Office further asserts that the adhesive article of the applied invention is generally supplied as a roll of tape and as such

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adjacent layers of backing with pressure sensitive adhesive are necessarily present. The Patent Office further asserts that in alternative embodiments a release liner may be used to separate adjacent layers of the adhesive tape. The Patent Office admits that DiZio et al. are silent as to the type of nonwoven material to be used as backing in the adhesive tape and the specific composition of the pressure sensitive adhesive. The Patent Office further asserts that Romanowski teaches a nonwoven pressure sensitive adhesive tape comprising a nonwoven fabric layer. Nonwoven fabrics include spunbonded, needle punched (needletacked), and spunlaced fabrics.

The Patent Office argues that since DiZio et al., Romanowski, and Nishikawa et al. are all from the same field of endeavor, (i.e. pressure sensitive adhesive coated nonwoven articles), that the purposes disclosed by Romanowski and Nishikawa et al. would have been recognized in the pertinent art of DiZio et al., and that it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify article of DiZio et al. with the motivation of successfully creating a pressure sensitive article protected from UV degradation.

Without agreeing to the Patent Office's characterization of DiZio et al., Romanowski, or Renz et al., or admitting that the rejection is even proper, Applicants note that claim 1 has been amended to include the feature "wherein the pressure sensitive adhesive is based on a poly(meth)acrylate or silicone." In view of the arguments presented hereinabove in response to the §103 rejection over Nishikawa et al., it is submitted that is known in the pressure sensitive adhesive arts that both acrylic pressure sensitive adhesives and silicone pressure sensitive adhesives generally have good resistance to degradation by sunlight, for example, and that one would not be properly motivated to include high levels of UV stabilizers in such adhesives, much less expect the surprising results obtained by Applicants.

For at least these reasons, it is submitted that the rejection of claim 1 under 35 USC § 103(a) as being unpatentable over DiZio et al. as evidenced by Romanowski in view of Renz et al. has been overcome and is patentable. Claims 2-26 each add additional features to patentable claim 1 and are likewise patentable.

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In summary, the rejection of claims 1-26 under 35 USC § 103(a) as being unpatentable over DiZio et al. as evidenced by Romanowski in view of Renz et al. has been overcome and should be withdrawn. Reconsideration and withdrawal of the rejection is requested.

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested.

Respectfully submitted,

Oct. 31, 2005
Date

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Handbook of Pressure Sensitive Adhesive Technology

Second Edition

Edited by

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15. Acrylic Adhesives

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Acrylic polymers have been known for a long time, but their utilization as pressure sensitive adhesives is relatively recent.

Acrylic acid was first synthesized in 1843. By 1901, research was being carried out on acrylic acid esters.¹ The first commercial production of poly(methyl methacrylate) took place in 1927 by Roehm and Haas AG in Germany. Acrylic dispersions have been produced by Badische Anilin und Soda Fabrik since 1929. The suitability of polyacrylates for pressure sensitive adhesives was recognized as early as 1928.² Despite all this early work, polyacrylates found extensive use for pressure sensitive adhesives only in the 1950s and attained their current importance in the 1960s.

Polyacrylates of a certain monomer composition are inherently pressure sensitive without any additional compounding. Besides polyacrylates, only polyvinyl ethers and some ethylene/vinyl acetate copolymers have this property. Such single-component adhesives have some advantages over compounded products.³ Low molecular weight ingredients that can migrate to the surface of an adhesive coating are absent. The elimination of compositional differences in the adhesive coating is highly desirable; the presence of low molecular additives at the adhesive-adherend interface can affect the bond. Such variation is difficult to avoid in multiphase systems, while uniformity is more easily achieved in single-component adhesives.

Polyacrylates possess some inherent properties that are superior to many other polymers used for pressure sensitive adhesives. The polymer is saturated and resistant to oxidation. It is transparent, colorless, and does not yellow upon exposure to sunlight. The resistance to oxidation surpasses that of most polymers used for pressure sensitive adhesives, except silicones.

Acrylic adhesives are available as solutions, aqueous emulsions, hot melts, and 100% reactive solids. Unlike most of the other polymers used for pressure

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